

REMARKS

Claims 1-3 and 5-10 are pending in the present application. The independent claims are claim 1 and claim 7, which are amended herein. The amendments to the claims are supported by the specification generally. Exemplary of such support is the disclosure at page 6, lines 4-11.

Claim 1 as amended is drawn to a method for making a plastic dry food container. According to the method of claim 1, a thin sheet of ethylene vinyl alcohol film is formed as an inner-most surface of the container. A dry food product is placed in the container and the container is sealed. The dry food product comes into contact with the ethylene vinyl alcohol film and acts as a desiccant to draw moisture away from the ethylene vinyl alcohol film. Claim 7 as amended is drawn to a multi-layer plastic container comprising an inner-most layer of ethylene vinyl alcohol that is less than 0.5 mils thick, and a dry food product that has desiccant properties sealed within the container.

35 U.S.C. § 103, Obviousness over Slat in view of Jones

Claims 1-3 and 5-10 stand rejected under 35 U.S.C. § 103(a) over Slat (USPN 6,214,281) in view of Jones et al. (USPN 6,063,414). This rejection is respectfully traversed.

Regarding claims 1-3 and 5-10, the Office Action states *inter alia*:

Slat discloses a container for food products (Column 1, lines 18-19) formed with a liner made from a material chosen from ethyl vinyl alcohol, PET or PEN (Column 4, lines 32-35), which is contact with the product (Figure 1, #10 and Figure 3, #30). ... However, Slat fails to disclose the dry food product acting as a desiccant to draw moisture away from the ethylene vinyl alcohol layer and the dry food product comprising a water activity of less than 0.6 or 0.4 upon the sealing step.

Jones et al. teaches dry pet foods with a water activity 0.7 or less (Column 11, lines 16-17) that acts as a desiccant since water binds to the soluble fiber material (Column 5, lines 3-6) in a polymer (Column 11, lines 7-9) container of gas impermeable materials (Column 5, lines 1-2)[.]

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a dry food product with a water activity 0.7 or less to act as a desiccant in a container in Slat in order to package food that does not require preservatives or removal of oxygen to attain an increased shelf life, freshness and palatability of the dry food product as taught by Jones et al.

In response, Applicant first has the following remarks regarding the disclosures of Slat and Jones.

Regarding Slat, Applicant notes that Slat addresses the problem of deformation of plastic containers caused by hot-filling of products into the containers. (See Col. 1, line 45 – Col. 2, line 11). To address the deformation of containers in hot-fill processes, Slat proposes a process for forming a bottle shaped container having a separately crystallized neck portion that has an enhanced mechanical strength and thermal resistance. (See Col. 2, lines 50 – 56). The neck portion is formed from a liner (10), which may be “formed from any number of polyester materials, such as PET, polyethylene naphthalate (PEN), ethyl vinyl alcohol (EVOH) and/or various blends of the same.” (Col. 4, lines 33 – 35). There is no further disclosure of using EVOH as an interior layer of the container. In fact, there is no further disclosure regarding EVOH at all. Rather, the remainder of the disclosure of Slat is addressed to crystallization of the neck portion and blow-molding of the final bottle-shaped container.

Regarding Jones, Applicant notes that Jones addresses the problem of microbial growth and oxidation of pet food. (See Col. 3, lines 19 – 22). To address the problem of the spoilage of pet food, Jones discloses dried pet foods that are made to have an increased amount of soluble fiber. (See Col. 5, lines 41 – 42). The soluble fiber binds the water in the pet food, thereby making the water unavailable for microbial growth and oxidation of the pet food. (See Col. 5, lines 3 – 6). Jones relates the concept of binding the water in the food to a water activity of the food, and discloses that “[i]n the present invention, this water activity is kept at a range of about 0.5 to about 0.8[.]” (See Col. 5, lines 8 – 12). As disclosed by Jones, keeping the water activity between 0.5 and 0.8 reduces the amount of water available to cause spoilage of the pet food because the water in the pet food is bound by the soluble fiber. Applicant notes that the pet food in Jones is never described as exhibiting desiccant properties or as drawing moisture out of the container environment. In fact, the word “desiccant” does not appear in the disclosure of Jones even once. The soluble fiber in the pet food of Jones is simply binding the water in the food to prevent it from reacting and spoiling the food. Thus, contrary to the assertion in the Office Action, the pet food of Jones is not acting as a desiccant to reduce the amount of water in either the container, or any layers making up the container.

Considering the foregoing remarks regarding the disclosures of Slat and Jones, Applicant submits that a *prima facie* case of obviousness has not been established. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. M.P.E.P. § 2143, citing *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). As applied to claims 1 – 3 and 5 – 10, none of the three criteria have been met.

1. There is no motivation or suggestion to combine Jones and Slat.

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." M.P.E.P. § 2143.01 at 2100-125, citing *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed.Cir.1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). None of these sources apply to the present case.

As to the nature of the problem to be solved, it was known to one of ordinary skill in the art at the time of the Applicant's invention that the oxygen barrier properties of EVOH deteriorated when the EVOH was exposed to moisture. This problem prevented the prior art from using an EVOH layer as the inner-most layer of a container holding a dry food product that comes into contact with the EVOH layer. Applicant's invention proposes solving this problem by placing a dry food product in the container that acts as a desiccant to draw moisture away from an inner-most EVOH layer. The nature of the problem is not one that provides motivation to combine Jones, which teaches preventing spoilage of pet food by making the pet food with a high amount of soluble fiber to keep the water activity of the pet food low, with Slat, which teaches making the neck portion of a bottle stronger so that it does not deform during hot-filling of product into the bottle. The nature of the problem is the adverse effect of moisture on EVOH,

and not the adverse effect of moisture on the microbial growth of food in the package, nor deformation of the container during hot-fill processes.

One of ordinary skill in the art would not consider preventing the spoilage of pet food and the deformation of a container to be in the same nature as preventing deterioration of the barrier properties of an inner-most EVOH layer of a food container. In addition, in view of the distinct differences encountered in pet foods and human foods, one of ordinary skill in the art would not think that a solution provided by a pet food with a low water activity could apply to any type of food other than pet food.

As to the teachings of the prior art, the bottle-shaped container of Slat is for use in hot-fill processes, such as those used for beverages. (See Col. 1, lines 45 – 54). The disclosure of EVOH in the liner (10) of the neck portion of the bottle-shaped container is limited to one line – Column 4 at line 34. There is no mention in Slat of any problems associated with exposing EVOH to moisture or of how to deal with such problems if encountered as a result of EVOH in the liner (10). Furthermore, the container of Slat addresses a problem encountered during hot-fill processes. No other applications, such as those disclosed by the Applicant or even application for the pet food of Jones, is taught for the container of Slat. Further still, the pet food in Jones is never described as exhibiting desiccant properties or as drawing moisture out of the container environment. Thus, the teachings of Slat and Jones do not suggest their combination.

As to the knowledge of persons of ordinary skill in the art, such persons would not be motivated to combine a reference concerned with preventing spoilage of pet food with a reference concerned with formation of bottles that can withstand hot-fill temperatures without excessive deformation. Moreover, because of the known adverse effects on EVOH caused by moisture, one of ordinary skill in the art would expect that an EVOH layer in contact with a food product would be adversely affected by moisture from the food. Thus, one of ordinary skill in the art would not expect that EVOH could even serve as the inner-most layer of a food package. It cannot be obvious to make a modification that one of ordinary skill in the art would not expect to work.

None of the sources provide an apparent motivation for the combination of Slat and Jones. “When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is

proper." M.P.E.P. § 2143.01 citing *Ex parte Skinner*, 2 USPQ2d 1788 (Bd.Pat.App.&Inter.1986).

Applicant submits that an explanation sufficient to meet this burden has not been provided.

As an explanation, the Office Action states merely that

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a dry food product with a water activity 0.7 or less to act as a desiccant in a container in Slat in order to package food that does not require preservatives or removal of oxygen to attain an increased shelf life, freshness and palatability of the dry food product as taught by Jones et al.

Applicant respectfully submits that this explanation is insufficient to show why the combination of Slat and Jones is proper. Applicant notes that "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." M.P.E.P. § 2143.01 citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed.Cir.1990). See also *In re Ochiai*, 71 F.3d 1565, 1570, 37 U.S.P.Q.2d 1127, 1131 (Fed. Cir. 1996); *In re Gordon*, 733 F.2d 900, 903, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). The Office Action does not provide a suggestion as to why it would be desirable or proper to combine Slat with Jones. Even if the combination were made, the result would not be the Applicant's invention because Jones does not show a food acting as a desiccant.

As stated in Section 2143.01 of the M.P.E.P.,

To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. Citing *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat.App.&Inter.1985).

Applicant submits that the references neither expressly nor impliedly suggest the invention of claims 1 ~ 3 and 5 ~ 10, and that sufficient reasoning for combining the cited references has not been provided.

2. There is no reasonable expectation of success for combining Jones and Slat.

Persons of ordinary skill in the art would not expect that EVOH could be used as the inner-most layer of a food package because of the adverse effects on EVOH known to be caused by moisture. There could be no reasonable expectation that putting pet food made according to

Jones in a container made according to Slat would result in the pet food acting as a desiccant to draw moisture from the layers of the container. In fact, one of ordinary skill in the art would expect that an EVOH layer in contact with the food product would be adversely affected by moisture from the food.

Moreover, one of ordinary skill in the art would not expect that a pet food according to Jones could act like a desiccant to draw moisture from a layer of a container according to Slat because Jones contains no disclosure that the pet food disclosed therein has desiccant properties.

3. Jones and Slat do not teach or suggest all of the claim limitations.

All limitations of the claimed invention must be considered when determining patentability. Neither Jones nor Slat, alone or in combination, teaches a food product sealed in a container that has EVOH as its inner-most layer, where the food product acts as a desiccant to draw moisture from the EVOH layer.

In particular, Slat addresses the problem of deformation of plastic containers caused by hot-filling of products into the containers by proposing a process for separate crystallization of the neck of the container portion to enhance its mechanical strength and thermal resistance. The neck portion is formed from a liner (10), which may be "formed from any number of polyester materials, such as PET, polyethylene naphthalate (PEN), ethyl vinyl alcohol (EVOH) and/or various blends of the same." (Col. 4, lines 33 – 35). There is no further disclosure of using EVOH as an interior layer of the container. In fact, there is no further disclosure regarding EVOH at all. Thus, contrary to the assertion in the Office Action, Slat does not teach an EVOH layer as an inner-most layer of a dry food container.

Jones addresses the problem of microbial growth and oxidation of pet food by proposing a dried pet food made to have an increased amount of soluble fiber. The soluble fiber binds the water in the pet food, thereby making the water unavailable for microbial growth and oxidation of the pet food. The pet food in Jones is never described as exhibiting desiccant properties or as drawing moisture out of the container environment. In fact, the word "desiccant" does not appear in the disclosure of Jones at all. The soluble fiber in the pet food of Jones is simply binding the water in the food to prevent it from reacting and spoiling the food. This is not the same as a dry food product that acts as a desiccant. Thus, contrary to the assertion in the Office Action, the pet food of

Jones is not acting as a desiccant to reduce the amount of water in either the container, or any layers making up the container.

Thus, neither Jones nor Slat, alone or in combination, teaches all the limitations of claims the independent claims 1 and 7, or the claims dependent thereon.

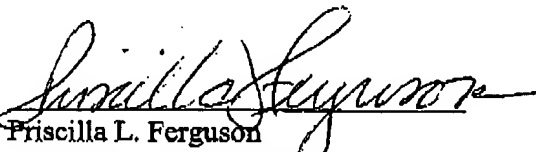
Conclusion

It is respectfully submitted that obviousness of the subject application over Slat (USPN 6,214,281) in view of Jones et al. (USPN 6,063,414) cannot be established, and that the present rejection of claims 1 – 3 and 5 – 10 is improper and should be withdrawn. Allowance of all pending claims is respectfully requested.

The examiner is invited to call the undersigned or Colin P. Cahoon at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application. The Commissioner is hereby authorized to charge any additional payment that may be due or credit any overpayment to Deposit Account No. 50-0392.

Respectfully submitted,

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Date


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